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Igor Igorevitch DIAKONOV et al

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REFERENCE DESIGNATION U.S. PATENT DOCUMENTS

Examiner Initial		Document No.	Date	Patentee
M	AA	3 780 575	12/25/73	Urbanosky
M	AB	3 859 851	01/14/75	Urbanosky
M	AB1	4 415 858	11/15/83	Hale
M	AC	4 994 671	02/19/91	Saffinya et al
M	AC1	5 005 406	04/09/91	Jasinski et al.
M	AD	5 351 532	10/04/94	Hager
M	AE	5 445 228	08/29/95	Rathmell et al
M	AF	5 517 024	05/14/96	Mullins et al
M	AG	5 518 590	05/21/96	Fang
M	AH	5 736 650	05/07/98	Hiron et al
M	AI	5 829 520	11/03/98	Johnson
M	AJ	6 023 340	02/08/00	Wu et al

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		Document No.	Date	Country	Translation Yes	Translation No
M	AK	42 25 904 A1	02/11/93	DE	X	
M	AL	2087059	06/20/90	JP	X	
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M	AN	99/56120 A1	11/04/99	WO		X
~~—~~	~~AN1~~	~~2084006~~	~~7/10/97~~	~~RU~~		X
~~—~~	~~AN2~~	~~1681643~~	~~9/18/89~~	~~RU~~		X

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OTHER INFORMATION PROVIDED (AUTHOR, TITLE, DATE, PLACE OF PUBLICATION, PERTINENT PAGES, ETC.)		
M	AO	Diakonov, I. I., Pokrovski G. S., Schot J., Castet S., and Gout R. J-C. "An experimental and computational study of sodium – aluminum complexing in crustal fluids" in Geochim. Cosmochim. Acta 60(1996), 197-211
M	AP	Midgely D. "A review of pH measurement at high temperatures" Talanta 37(1990) 8, 767-781.
M	AQ	Solodov I. N., Velichkin, V. I. Zotov, A.V. et al "Distribution and geochemistry of contaminated subsurface waters in fissured volcanogenic bed rocks of the Lake Karachai area, Chelyabinsk, South Urals" Lawrence Berkeley Laboratory Report 36780/UC-603 (1994b) RAC-6, Ca, USA
	AR	Nikolsky B.P. (ed) (1987) Physical chemistry. Lenigrad, Khimiya Publishers, 880pp. (in Russian).
M	AS	Bates R.G. (1964) Determination of pH. Theory and practice. John Wiley, NY. Chapter 9 (1973)
M	AT	Ives D.J. and Janz G.J. (1961) Reference electrodes: Theory and Practice. Academic Press New York, 127pp. Chapter 8 - 10
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M	AV	Disteche A. (1962) Electrochemical measurements at high pressures. J. Electrochem. Soc., 109, 11, 1084-1092.
	AW	Disteche A (1964) Nouvelle cellule a electrode de verre pour la mesure directe du pH aux grandes profondeurs sous marines. Bull Inst. Oceanogr., 1320, 1-10.
M	AX	Disteche A and Disteche S (1967) The effect of pressure on the dissociation of carbonic acid from measurements with buffered glass electrode cells. J. Electrochem. Soc., 114, 330-340.
M	AY	Ross J.W., Riseman J.H., and Krueger J.A. (1973). Potentiometric gas sensing electrodes. Applied chemistry, 36, 473-486.
	AZ	Le Peintre M.M. (1960) Bull. Soc. Franc. Electriciens., 8, 9, 584-592.
M	BA	Culberson C. and Pytkowicz R.M. (1968) Effect of pressure on carbonic acid, boric acid, and the pH in seawater. Limnol. Oceanogr., 13, 3, 403-417.
	BB	Krukov P. and Zarubina (1982) Measurements of pH of some standard buffer solutions at pressures to $1.030 \cdot 10^5$ Pa and temperatures 0-25°C. *Izvestiya Sibirskogo Otdel. Akad. Nauk SSSR, Seriya Khimicheskih Nauk*, **1**, 59-66 (in Russian).
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M	BG	Brand M.J. and Rechnitz G.A. (1970) Differential potentiometry with ion-selective electrodes. A new instrumental approach. Anal. Chem., 42, 616-622.
M	BH	Crolet J.L. and Bonis M.B. (1983) pH measurements in aqueous CO2 solutions under high pressure and temperature. Corrosion, 39, 2, 39-46.
M	BI	Pokrovski G.S., Zotov A.V., Sergeev A.S., Gout R., and Schott J. (1993) New glass electrodes for pH measurements in aqueous solutions up to 200°C. *Proc. 4th Int. Symp. on Hydrothermal Reactions, Nancy*, 189-192.
M	BJ	Pokrovski G.S., Schott J., and Sergeev A.S. (1995) Experimental determination of the stability constants of $NaSO_4^-$ and $NaB(OH)_4^0$ in hydrothermal solutions using a new high-temperature sodium-selective glass electrode - Implications for boron isotopic fraction. *Chemical Geology*, 124, 253-265.
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	BM	Emmerich von B. (1978) Die Emailelektrode, eine neue Losung zur pH-Messung im Betrieb. Regelungstechnische Praxis, 11, 313-340.
	BN	Ostvold T. and Kaasa B. (1998) Prediction of pH and mineral scaling in waters with varying ionic strength containing CO_2 and H_2S for 0<T(C)<200 and 1<P(bar)<500. In Proceedings, 4th Intl. Symp. Advances in Solving Oilfield Scale. Aberdeen, January, 1998.
	BO	Niedrach L (1980) Oxygen ion conducting ceramics: A new application in high temperature-high pressure pH sensors. Science 207,1200-1202.
	BP	Niedrach L. (1980) A new membrane-type pH sensor for use in high temperature - high pressure water . J. Electrochem. Soc. 127, 2122-2130.
	BQ	Niedrach L. (1982) Use of a high temperature pH sensor as a "Pseudo-reference electrode" in the monitoring of corrosion and redox potentials at 285C. J. Electrochem. Soc. 129, 7, 1445-1449.
	BR	Niedrach L. W. and Stoddard H. (1984) Development of a high temperature pH electrode for geothermal fluids. J. Electrochem. Soc. 131, 5, 1017-1026.
	BS	Lvov, S. N. Zhou, X. Y. Macdonald, D. D (1999) Flow-through electrochemical cell for accurate pH measurements at temperatures up to 400C. J. Electroan. Chem., 463, 2, 146-156,
	BT	Lvov, S. N. Gao, H. Kouznetsov, D. Balachov, I. Macdonald, D. D. (1998) Potentiometric pH measurements in high subcritical and supercritical aqueous solutions. Fluid Phase Equilibria, 150/151, 515-523,
	BU	Lvov, S. N Gao, H. Macdonald, D. D. (1998) Advanced flow-through external pressure-balanced reference electrode for potentiometric and pH studies in high temperature aqueous solutions, J. Electroan. Chem., 443, 2, 186-194.
	BV	Kriksunov, L. B., Macdonald D.D (1995) Corrosion in Supercritical Water Oxidation Systems: A Phenomenological Analysis J. Electrochem. Soc. 142, 12, 4069-4073,
	BW	Macdonald, D. D. Kriksunov, L. B. Millett, P. J. (1994) Development and Testing of Combination pH Sensing Electrodes for Use at High Temperatures and Pressures. Extended abstracts, Electrochemical Soc., 2, 276-277
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	BY	Macdonald D. D, Hettiarachchi S, Song H, Makela K, Emerson R and Benhaim M (1992) Measurement of pH in subcritical and supercritical aqueous systems. J Sol Chemistry 21, 8, 849-881,
	BZ	Macdonald D. D., Hettiarachchi S and Lenhart S (1988) The thermodynamic viability of yttria-stabilized zirconia pH sensors for high temperature aqueous solutions. J. Sol. Chem. 17, 8, 719-732.
	CA	Hettiarachchi S, Kedzierzawski P and Macdonald D. D. (1985) pH measurements of high temperature aqueous environments with stabilized-zirconia membranes. J Electrochem. Soc. 132, 8, 1866-1870.
	CB	Tsuruta T. and Macdonald D. D. (1982) Stabilized ceramic membrane electrodes for the measurement of pH at elevated temperatures. J. Electrochem. Soc. 129, 6, 1221-1225.
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	CD	Ding, K. and Seyfried, W. E. (1996) Direct pH Measurement of NaCl-Bearing Fluid with an in Situ Sensor at 400C and 40 Megapascals. Science, 5268, 1634-1635.
	CE	Bourcier W. L., McKibben M. A. and Barnes H. L. (1983) Hydrothermal pH and H_2 measurements using the zirconia electrode and Teflon membrane. Proc. of the 4th International Symposium on Water-Roch Interaction, Misasa, Japan, 59-61.,
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	CG	Light T. S. and Fletcher K. S. (1985) Evaluation of the zirconia pH-sensor at 95°C. Analyt. Chem. Acta. 175, 117-126.
	CH	Inda Y, Yamashita K., Umegaki T., and Greenblatt M. (1996) High temperature pH sensitivities of stabilized zirconia and ceria ceramics. Solid Stat Ionics, 86-88, 1121-1124.
	CI	Buzzanca G., Ronchetti C., and Uberti F. (1986) Probe for pH measurements at high temperature. Proceedings, 2nd Intl. Conf. On On-line Surveillance and Monitoring, Venise, Italy, May 1986, 271-286.
	CJ	Dobson J.V., Firman R.E., and Thirsk H.R. (1971) The behavior of cells using silver / silver chloride and skin-calomel electrodes at temperatures from 25 to 200C and 1 bar to 2 kbar pressure. Electrochimica Acta, 16, 793-809.

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	CL	Agarwal A.K. and Staehle R.W. (1977) A silver-silver chloride reference electrode for the hifh temperature and high pressure electrochemistry. Corrosion, 33, 11 418-419.
	CM	Vermilyeva D.A. and Indig M.E. (1972) J. Electrochem. Soc., 119, 39.
	CN	Indig M.E. and Nelson J.L. (1991) Electrochemical measurements and modelling predictions in boiling water reactors under various operating conditions. Corrosion, 47, 3, 202-209
	CO	Munro, W.A. Thomas, C.L.P. Simpson, I. Shaw, J. Dodgeson, J. (1996) Deterioration of pH Electrode Response Due to Biofilm Formation on the Glass Membrane. *Sensors and Actuators* B37, pp187-194.
	CP	Davis R.D. (1973) A major step toward self-maintenance of pH electrodes. Instrumentation in the food and beverage industry. 2, 83-86.
	CQ	Wakeman R. (1986) Electrofiltration: microfiltration plus electrophoresis. The Chemical Engineer, June 1986, 65-70.
	CR	Manheim F. (1961) In situ natural measurements of pH and Eh in natural waters and sediments. Stockholm Contr. Geol., 8, 27-36.
	CS	Ben-Yaakov S. and Kaplan I.R. (1968) High pressure pH sensor for oceanographic applications. Rev. Sci. Instr., 39, 8, 1133-1138
	CT	Ben-Yaakov S. and Kaplan I.R. (1968) pH-Temperature profiles in ocean and lakes using an in situ probe. Limnol. Oceanogr., 13, 688-693.
	CU	Ben-Yaakov S. and Kaplan I.R. (1968) A versatile probe for in situ oceanographic measurement. J. Oceanogr. Technol., 2,3, 25-29.
	CV	Whitfield M. (1971) A compact potentiometric sensor of novel design. In situ determination of pH, pS^{2-} and Eh. Limnol. Oceanogr., 16, 829-837.
	CW	Bolviken B., Logn O., Breen A., Uddu O. (1972) Instrument for in situ measurements of Eh, pH and self-potentials in diamond drill holes. Proceedings of 4th Intl. Geochem. Explor. Symp. London 17-20 April, 1972.
	CX	Liden J., Ginstrup O., and Ingri N. (1980) A probe for the measurement of pH and pe in situ in natural water systems. Chemica Scripta, 15, 203-205.
	CY	Seers K.J. (1983) An instrument for simultaneous measurement of Eh and pH in boreholes. BMR J. Austr. Geology and Geoph., 8, 89-91.
	CZ	Armishev S.V., Beloborodov S.M., Zhdanov N.N., Zotov, A.V. (1988) First experience of the remote study of modern hydrotherms on the ocean bed using towed acoustical-geochemical complex. *Okeanologiya*, 33, 860-867 (in Russian).
	DA	Solodov I.N et al. (1993) Technogenic oxidation changes to uranium bearing sandstones. *Litologiya i Poleznie Iskopaemie*, 6, 84-96 (in Russian).
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	DC	Solodov, I.N., Khoteev, A.D., Chertok, M.B. and V.A.Zadvornov. (1997) Geochemistry of natural and contaminated underground waters in the area of surface and underground storages of liquid radioactive wastes (Chelyabinsk and Tomsk oblasts of Russia). PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON RADIOACTIVE WASTE MANAGEMENT AND ENVIRONMENTAL REMEDIATION, 1997, VOL 6, page(s): 737-742.
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	DF	Konovalov S.V., Solodov I.N., Fazlullin M.I., and V.M.Shustov (1983) Downhole measurements of ion contents, temperature and pressure to monitor underground leaching. Trudi VSEGINGEO, 154, 33-36 (in Russian).
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	DH	Zotov A.V., Prihod'ko V.A., and Sheimin E.G. (1981) pH-Eh-measurements in thermal waters in deep wells. *Doklady Akademii nauk SSSR*, 260, 436-440 (in Russian).

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	DJ	Zhdanov N.N., Osadchii E.G., Kondrat'yev,V.V., Beloborodov S.M., Sorokin V.I., Zotov A.V., and Solodov I.N. (1994) The potentiometric probe. The design and results of investigations of natural systems. In: Experimental problems of geology, Nauka Publishers, Moscow, 668-683 (in Russian).
M	DK	HYDROLAB DataSonde 4 and Minisonde Multiprobes. HYDROLAB Corp. Web site: http://www.hydrolab.com/html/series4a.htm#datasonde4a, see also
M	DL	Greenspan MiniSonde -CS302. Greenspan Technology Pty Ltd. Web site: http://www.greenspan.com.au, see http://www.greenspan.com.au/__data/page/3956/CTDP1200-SP.PDF
M	DM	Aquilina L., Cecile J.L., Sureau J.F., and Degranges P. (1993) WELCOM (Well Chemical On-line-monitoring) I. Technical and economic aspects. Scientific Drilling, 5, 5-12.
M	DN	Sureau J.F., Fritz B., and Aquilina L. (1993) Diagraphie et suivi geochimiques des fluides en cours de forage. Resultats preliminaires du forage Balazuc-1, Ardeche. Programme Geologie Profonde de la France. C.R. Acad. Sci, Paris, 316, Serie II, 349-356.
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M	DR	Heath S.M. and Pritchard A.M. (1995) On-line chemical sensing technology for downhole and topside monitoring of produced brines. Advances in solving oilfield scaling. Conf. Abstr., Aberdeen, November 21,22, 1995.
M	DS	Shorthouse G. and Peat B. (1998) Downhole chemical sensors for sub-sea oil wells. Material Science News, 2, 12-13.
M	DT	Snieckus D. (1999) Tipping the scales. Offshore Engineer, September 1999, p117.
M	DU	Craston D.H., Jones C.P., and Williams D.E. (1991) Microband electrodes fabricated by screen printing process: applications in electroanalysis. Talanta, 38, 1, 17-26.
~~M~~	DV	Midgley D. and Torrance K. (1991) Potentiometric Water Analysis. J. Wiley & Sons. 586pp (pages 14-25, 78-88)
M	EA	English statement 1
M	EB	English statement 2
M	EC	English statement 3
M	ED	English statement 4

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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

1. The attached cited information should not be construed as an admission that any of the above items are prior art to the subject invention.
2. This is not a representation that a search has been made.